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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
SHAPIRO, LEONID	

ART UNIT	PAPER NUMBER
2629	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/828,933	MUELLER ET AL.	
	Examiner	Art Unit	
	Leonid Shapiro	2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 April 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-125* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-27,29,30,32-38,40-90,92,93,95-101 and 103-125* is/are rejected.

7)☒ Claim(s) *28,31,39,91,94 and 102* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date 1-10-06, 8-29-05, 7-18-05, 3-28-05, 1-17-04, 2-14-05, 9-29-04, 8-2-04
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Claim Objections

Claim 46 is objected to because of the following informalities:

Claim 46 is missing.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. Claims 1,3-4,6,12,14-15,23,25-26,29-30,64,66-67,69 are rejected under 35 U.S.C. 102(e) as being anticipated by Matthies (6,498,592 B1).

As to claim 1,64 Matthies teaches a tile lighting system (col. 1, lines 9-11), comprising:

a plurality of addressable lighting units disposed in a grid (fig. 1, items 120,122,124, col. 4, lines 10-44);

a controller for controlling the illumination from the addressable lighting units (fig. 2, item 210, col. 8, lines 51-63); and

a light diffusing cover for covering the grid (fig. 12, item 2020, col.21, lines 11-23).

As to claims 3-4,14-15,25-26,66-67,77-78,88-89 it is inherent that any diffusing cover is translucent (diffusing cover could not be opaque or 100% transmissive) and is provided with any geometrical shape.

As to claims 6,69 Matthies teaches the lighting system is configured to be disposed in proximity to similar lighting systems in a tile arrangement (fig. 1, items 120,122,124).

As to claims 12,75 Matthies teaches a tile light (col. 1, lines 9-11), comprising:

a plurality of LED lighting units disposed on a circuit board in an array (fig. 1, items 120,122,124, col. 4, lines 10-44 and lines 58-61), wherein the LED lighting units respond to control signals to produce mixed light of varying colors (fig. 2, item 210, col. 8, lines 51-63 and fig. 6A, items RGB, col. 16, lines 4-36); and

a diffuser for receiving light from the lighting units (fig. 12, item 2020, col.21, lines 11-23).

As to claims 23,86 Matthies teaches a tile light (col. 1, lines 9-11), comprising:

a plurality of linear LED lighting units disposed about perimeter of a substantially rectangular housing (fig. 1, items 120,122,124, col. 4, lines 10-44 and lines 58-61), and

a diffuser for diffusing light from the lighting units (fig. 12, item 2020, col.21, lines 11-23).

As to claims 29-30,92-93 Matthies teaches the housing is divided into a plurality of cells and sells are rectangular (fig. 1, items 100,122,124).

2. Claims 47-51, 56-61,109-113,118-122 are rejected under 35 U.S.C. 102(e) as being anticipated by Cok (6,999,045 B2).

As to claim 47,56,109,118 Cok teaches a modular component for a lighting system and a lighting system (fig. 1, item 8, col. 2, lines 51-53), comprising:

a series of LED-based lighting units disposed in an array on a circuit board (fig.1, item 10, col. 2, lines 51-53), wherein each lighting unit is configured to respond to data addressed to it in a serial addressing protocol (fig. 1, items 10,12,14, col. 3, lines 27-42).

As to claims 48-50,58-60,110-112,120-122 Cok teaches an authoring system for authoring effects on the tile lighting system or tile lighting systems (fig. 1, item14, col. 2, lines 59-61).

As to claims 51,61,113,123 Cok teaches an effect displayed on the tile light corresponds to an incoming video signal (figs. 1,4, items 10,12,14 col. 3, lines 27-42).

As to claims 57,119 Cok teaches the modular components are disposed adjacent to each other to form a large array of modular components (col. 2, lines 41-50).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 2,13,24,65,76,87 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matthies in view of Okuda (JP 2000155544 A).

Matthies does not disclose the light diffusing cover includes a phosphorescent material.

Okuda teaches phosphorescent material on a display part (Solution).

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate teachings of Okuda into Matthies system in order to emit different color light (Problem to be solved in the Okuda reference).

4. Claims 5,16,27,68,79,90 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matthies in view of Kashima et al. (5,289,351).

Matthies does not disclose the light diffusing cover is provided with an irregular pattern.

Okuda teaches the grained exit face may have an irregular pattern (fig. 5, col. 3, lines 14-27).

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate teachings of Kashima et al. into Matthies system in order to include a specular light diffusing to the cover (col. 1, lines 66-68 in the Kashima et al. reference).

5. Claims 7-9,17-20,32-34,70-72,80-82,95-97 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matthies in view of Cok.

As to claims 7,70 Matthies does not disclose the lighting units are controlled using a string light protocol.

Cok teaches the lighting units are controlled using a string (serial in the reference) light protocol (fig. 1, items 10,12, col. 2, lines 51-58).

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate teachings of Cok into Matthies system in order to supply signals to the tile display (col. 1, lines 6-8 in the Cok reference).

As to claims 8-9,17-19,32-34,71-72,80-82,95-97 Cok teaches an authoring system for authoring effects on the tile lighting system or tile lighting systems (fig. 1, item14, col. 2, lines 59-61).

Notice, that the tile lighting system could be one tile of the larger tile system.

As to claim 20,83 Cok teaches an effect displayed on the tile light corresponds to an incoming video signal (figs. 1,4, items 10,12,14 col. 3, lines 27-42).

6. Claims 10-11,21-22,35-36,73-74,84-85,98-99 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matthies in view of Tokimoto et al. (6,237,290 B1).

Matthies does not disclose the system is disposed in architectural environment and on a building exterior.

Tokimoto et al. teaches the system is disposed in architectural environment and on a building exterior (fig. 1, item 10,14, col. 2, lines 46-59).

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate teachings of Tokimoto et al. into Matthies system in order to

place a large scale display device on the exterior of a high-rise building (col. 1, lines 53-55 in the Tokimoto et al. reference).

7. Claims 37-38,40-43,52-53,100-101,103-106,114-115 rejected under 35 U.S.C. 103(a) as being unpatentable over Cok in view of Matthies.

As to claims 37,100 Cok teaches a lighting system (col. 1, lines 6-8), comprising:

a series of LED-based lighting units, wherein each lighting unit is configured to respond to data addressed to it in a serial addressing protocol (figs. 1,4, items 10,12,14 col. 3, lines 27-42).

Cok does not disclose the series of lighting units is configured in a flexible string and a fastening facility for holding the flexible string in a predetermined configuration.

Matthies teaches flexible board (fig. 16, item 2301) and a fastening facility for holding the flexible string in a predetermined configuration (fig. 16, item 2101, col. 22, lines 12-22).

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate teachings of Matthies into Cok system in order to build large-area display (col. 1, lines 8-10 in the Matthies et al. reference).

As to claim 38, Matthies et al. teaches the fastening facility is a substantially linear channel for holding the flexible string (fig. 16, item 2101, col. 22, lines 12-22).

As to claims 40-42,103-105 Cok teaches an authoring system for authoring effects on the tile lighting system or tile lighting systems (fig. 1, item14, col. 2, lines 59-61).

As to claims 43,106 Cok teaches an effect displayed on the tile light corresponds to an incoming video signal (figs. 1,4, items 10,12,14 col. 3, lines 27-42).

As claims 52-53,114-115 Matthies teaches a flexible printed circuit board (fig. 16, item 2301, col. 22, lines 12-22)

8. Claims 44-45,107-108 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matthies and Cok in view of Tokimoto et al.

Matthies and Cok do not disclose the system is disposed in architectural environment and on a building exterior.

Tokimoto et al. teaches the system is disposed in architectural environment and on a building exterior (fig. 1, item 10,14, col. 2, lines 46-59).

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate teachings of Tokimoto et al. into Matthies and Cok system in order to place a large scale display device on the exterior of a high-rise building (col. 1, lines 53-55 in the Tokimoto et al. reference).

9. Claims 54-55,62-63,116-117,124-125 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cok in view of Tokimoto et al.

Cok does not disclose the system is disposed in architectural environment and on a building exterior.

Tokimoto et al. teaches the system is disposed in architectural environment and on a building exterior (fig. 1, item 10,14, col. 2, lines 46-59).

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate teachings of Tokimoto et al. into Cok system in order to place a large scale display device on the exterior of a high-rise building (col. 1, lines 53-55 in the Tokimoto et al. reference).

Allowable Subject Matter

10. Claims 28,31,39,91,94,102 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Relative to claims 28,91 the major difference between the teaching of the prior art of record (Matthies, Cok and Okuda) and the instant invention is that a reflector interior to the housing for providing a consistent level of light output to different portions of the diffuser.

Relative to claims 31,94 the major difference between the teaching of the prior art of record (Matthies, Cok and Okuda) and the instant invention is that the cells are triangular.

Relative to claims 39,102 the major difference between the teaching of the prior art of record (Matthies, Cok and Okuda) and the instant invention is that the fastening facility holds the flexible string in an array.

Telephone Inquire

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leonid Shapiro whose telephone number is 571-272-7683. The examiner can normally be reached on 8 a.m. to 5 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Hjerpe can be reached on 571-272-7691. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

LS
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